cal practitioner, medical teacher, editor of the *Journal of the American Medical Association* and secretary general of the executive committee of the International Medical Congress. During this severe strain he was stricken with complete right-sided paralysis, from which he fortunately soon recovered, but which left him with a slight weakness of the affected side. This illness, although so serious, was for him only an incident. With his returning strength he again took up his burdens and worked on with energy, patience and success. In this he exemplified his dominating characteristics. Whatever he did was done with all his might, and here we have the secret of his life: it was his strength of character, his physical and mental efficiency, his singleness of purpose, his transcendent altruism that made him a so potent factor in the development of so many of our useful institutions.

With the cessation of his works, and the extinction of the light of his life we have lost an active agent and an unwavering beacon in the upward trend to better things.

Frank S. Johnson.

SCIENTIFIC BOOKS.

Observations and Investigations made at the Blue Hill Meteorological Observatory, Massachusetts, U. S. A., in the Years 1901 and 1902, under the direction of A. Lawrence Rotch. Annals of the Astronomical Observatory of Harvard College, Vol. XLIII., Part III. 4to. 1903. Pp. 115–239. Pls. IV.

The Blue Hill volumes of the *Annals of the Harvard College Observatory* are always sure of a warm welcome at the hands of meteorologists, because of the importance and the high quality of the results which they contain. The present volume is no exception to this general rule. If there be any who do not know what meteorology owes to Mr. Rotch, such persons will find a simple statement of the reason for this great indebtedness in the following words, quoted from the introduction to the volume before us, which is signed by Mr. Rotch: 'All the expenses of the observatory continue to be paid by the undersigned, except the cost of publishing the investigations and observations.'

The introduction makes fitting mention of the death of Mr. A. E. Sweetland, the youngest member of the Blue Hill staff, whose name has already appeared in the columns of Science in connection with investigations carried on by him at the observatory. A fireproof addition to the observatory has been built, containing a library and a storage room for kites, and certain other much-needed additions to the older building have been made. It may be noted, in passing, that the total cost of these additions and alterations amounted to $7,000, and was paid by Mr. Rotch.

Besides maintaining the routine observations and automatic records at the summit and base stations, the chief investigation carried on at Blue Hill Observatory has been the exploration of the air by means of kites. The observations obtained by means of kites from August, 1894, to February, 1897, were published and discussed in Vol. XLII., Part I., Appendix B, of the *Annals of the Harvard College Observatory.* In the present volume the kite observations, together with the simultaneous ground observations, from March, 1897, to the close of the year 1902, are published in full (Appendix C, by H. H. Clayton), while the discussion of these observations, which is eagerly awaited, is reserved for a later volume. Since December, 1901, kite flights from Blue Hill have been made once a month, when possible, in cooperation with similar ascents of kites and balloons in Europe, carried out under the auspices of the International Committee for Scientific Aeronautics, of which committee Mr. Rotch is the American member. The results of the kite flights made from the deck of a steamer during a trip across the North Atlantic, reference to which has been made in these columns, are given in Table XIV. It will be remembered by readers of this journal that, as the result of his success in flying kites from the steamer on this trip, and previously from a tow-boat

in Massachusetts Bay, Mr. Rotch proposed an investigation by means of kites, flown from on board ship, of the meteorological conditions above the trades and the doldrums, a project which has received the approval of the International Aeronautical Congress, and of other scientific bodies.

The 'Effect of Meteorological Conditions upon Audibility' under various conditions at Blue Hill was observed during the year 1901, and the results are discussed by Mr. Rotch on pages 156–163. The source of sound was a steam whistle in the town of Hyde Park, the whistle being 4,400 meters northwest of and about 170 meters below the observatory. Investigations upon the electrification of, and upon the quantity of carbon dioxide contained in the air were conducted at the observatory by Mr. G. W. Pickard. Appendix D (pp. 215–239) is a discussion of 'Kites and Instruments Employed in the Exploration of the Air, at Blue Hill Observatory, 1897–1902,' by S. P. Fergusson, which will be found useful by any persons who are undertaking scientific kite construction. Of special interest are the sections which concern kite meteorographs, in devising and constructing which Mr. Fergusson has shown the greatest skill, ingenuity and patience.

Since Blue Hill Observatory first began its pioneer work in kite meteorology there has been a remarkably rapid development of similar work in Europe and elsewhere, but there is no reason to fear that the Blue Hill results will suffer in any way by comparison with those obtained abroad. R. DEC. W.

Vorlesungen ueber theoretische und physikalische Chemie, drittes Heft, Beziehungen zwischen Eigenschaften und Zusammensetzung. Second edition. By J. H. VAN'T HOFF. Braunschweig, Vieweg. 1903. 8vo. Pp. x + 155.

This is the third and concluding part of the second edition of Professor van't Hoff's 'Lectures.' Since the German, French and English versions of the first edition were noticed in SCIENCE, it is sufficient to say that in the present edition the subdivision and treatment of the subject are the same as in the first. There are a few verbal changes and some slight additions amounting to ten pages. The value of the book is immensely increased, however, by the fact that an index to the whole work has been furnished. The book is so familiar to chemists as a masterpiece of its kind that further commendation would be superfluous. ALEXANDER SMITH.

SCIENTIFIC JOURNALS AND ARTICLES.

The Journal of Comparative Neurology and Psychology for July contains in addition to editorial and review matter, a paper of 67 pages by Miss Jessie Allen, entitled, 'The Association Process of the Guinea Pig, A Study of the Psychical Development of an Animal with a Nervous System well Medullated at Birth.' This research forms an excellent control to the similar one recently published by Dr. J. B. Watson on the white rat, the nervous system of which is entirely non-medullated at birth. The rat comes to psychical maturity at about the twenty-third day; the guinea pig, on the other hand, reaches psychical maturity on the third day, but even in the adult lacks almost entirely that ingenuity which is so characteristic of the rat's method of overcoming obstacles in order to reach food. Histological examination of the developing guinea pig's brain reveals differences from the developing rat's brain which can be closely correlated with the differences in psychical development.

A QUARTERLY journal entitled 'Opthalmology' will begin publication on October 1, with Dr. H. D. Wurdeman as editor and publisher. The associate editors include Drs. Chas. H. May, New York City; Casey A. Wood, Chicago; Chas. A. Oliver, Philadelphia; Blencowe E. Fryer, Kansas City; Albert B. Hale, Chicago; Edmond E. Blaauw, Buffalo; Chas. Zimmermann, Milwaukee; Dr. Wm. Zentmayer, Philadelphia; J. Guttman, New York City; and Frank Allport, Chicago.

SOCIETIES AND ACADEMIES.

THE BIOLOGICAL SOCIETY OF ST. LOUIS.

IN an earlier number of this journal, August 14, 1903, there appeared a brief notice of the organization of the Biological Society of St. Louis. Since that time a more formal